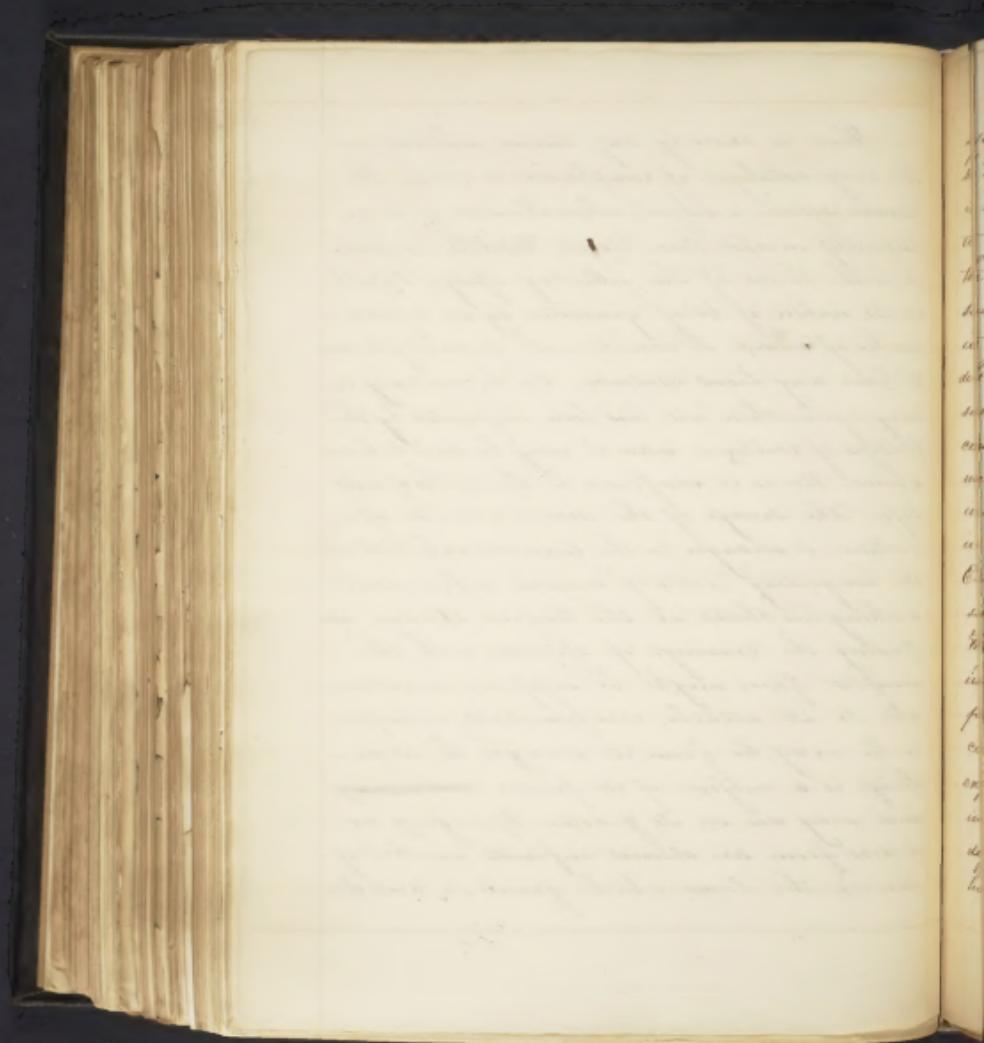


Essay
on
Acute Hepatitis
By
Carter Henry Bradley
of
Virginia

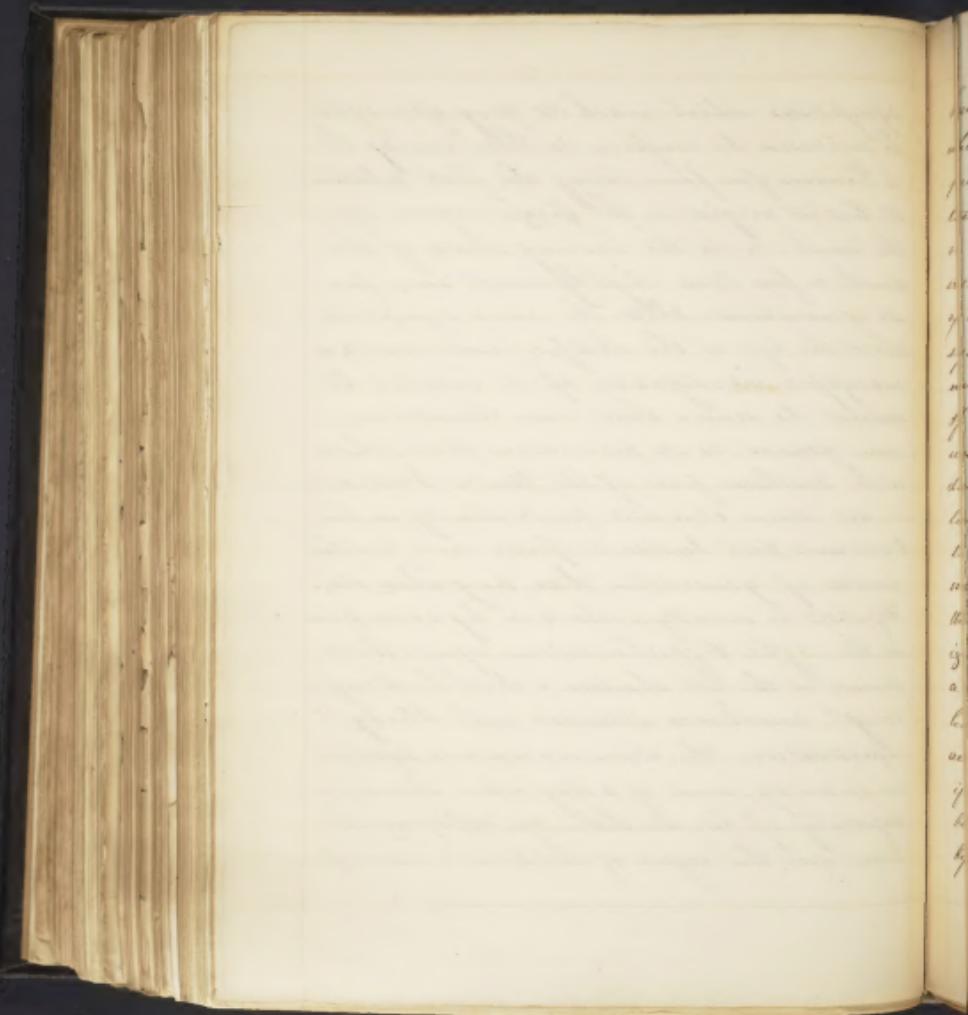
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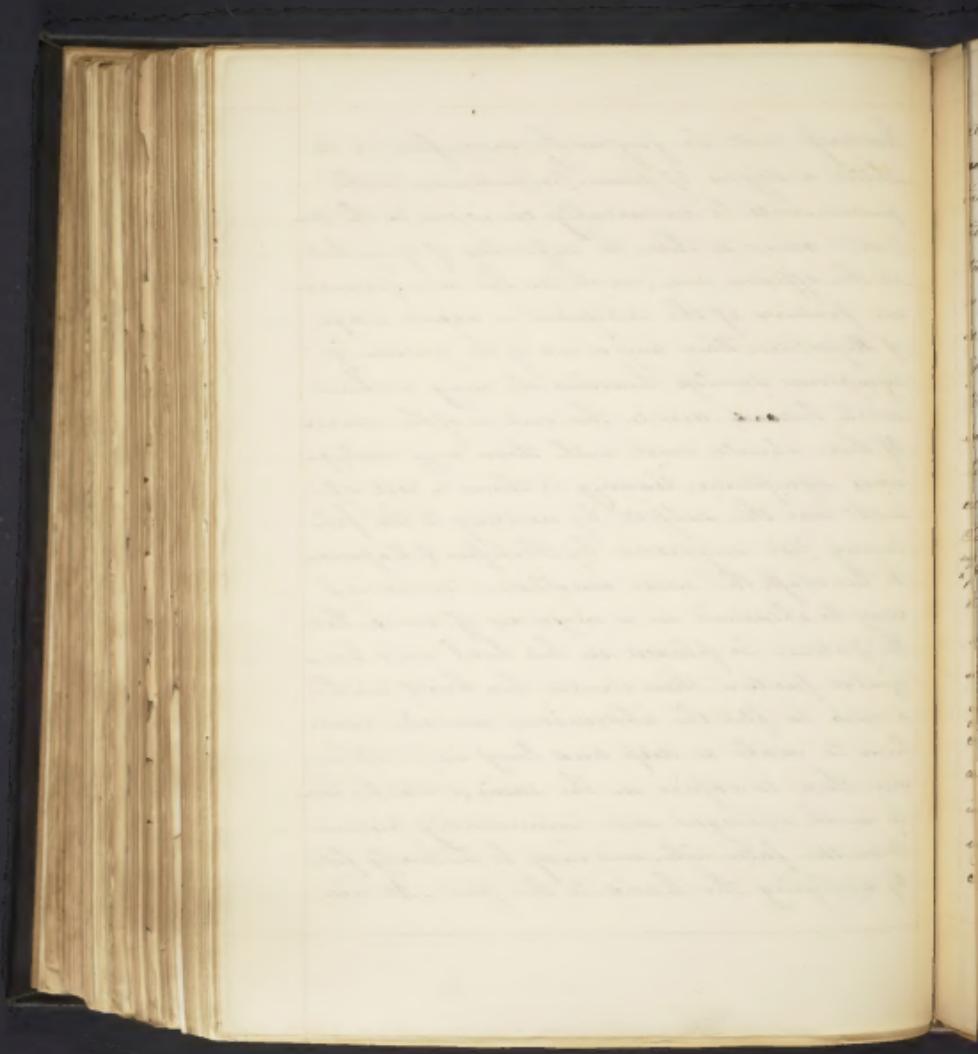
There is scarcely any disease exhibited in
the long catalogue of complaints to which the
human system is subject, whose character is more
distinctly marked than ~~Acute~~ Hepatitis, designed
to be the theme of the following essay. Capable
in its nature of being generated by an infinite
number of causes, it cannot with propriety be said
to have any local residence. On the contrary, in
every region, whose soil has been impinged by the
footsteps of civilized man, it may be said to have
a home. Nor is it confined to the walks of civil
life. The savage of the desert, a shelter of
nature, a stranger to the luxuries exhibited in
the banqueting rooms of modern refinement,
slaking his thirst at the limpid stream, ap-
peasing the cravings of appetite with the
simplest fare, might be supposed, insuscep-
tive to its attacks, comparatively exempt
as he may be from its ravages. He, never-
theless, is a subject of its power. ~~and~~
and may die in its grasp - Springing as
it does from an almost infinite number of
sources, the laws which govern it are tho-



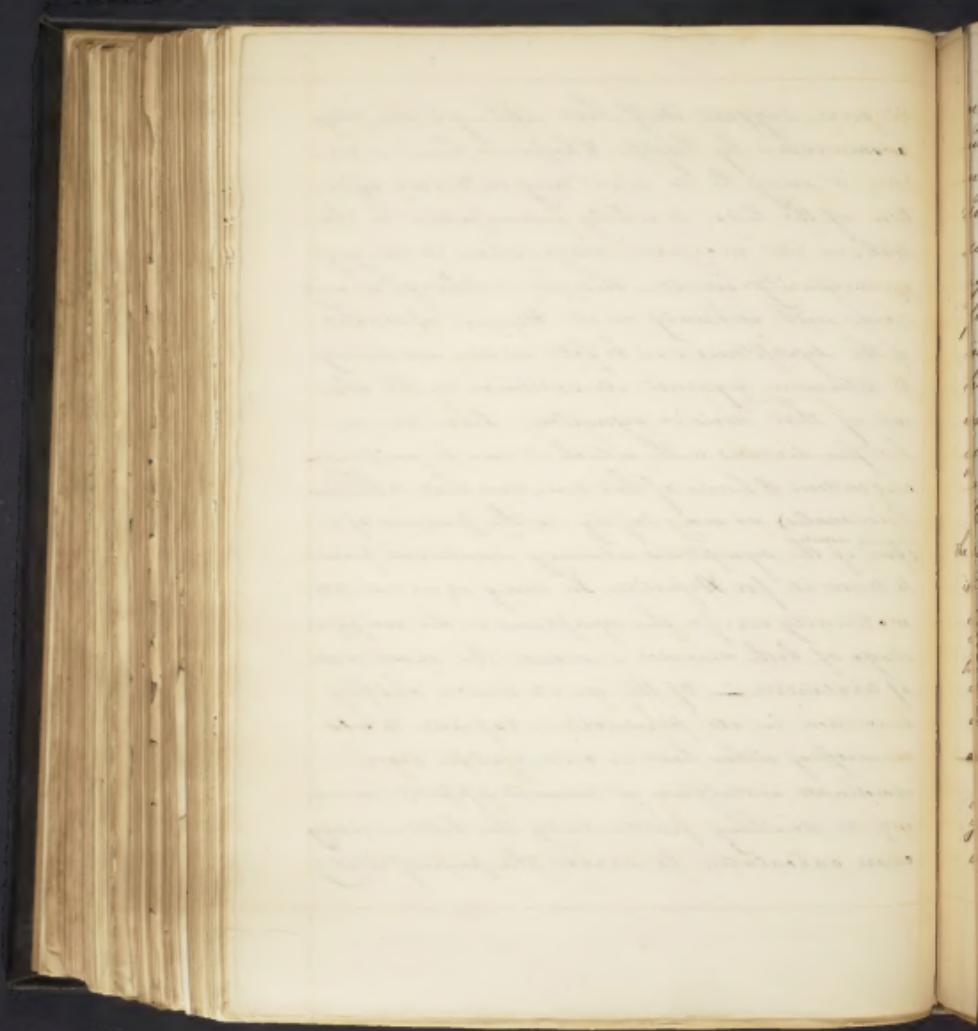
symptoms which mark its progress, might be supposed to conform to this variety, this is however far from being the fact. Whether it has its origin in the frozen regions of the north, or in the burning suns of the south, a few laws slightly varied, serve for its government, whilst the same symptoms direct the eye of the skilful practitioner to a successful investigation of its nature. It cannot be denied that some climates are more genial to its production than others, in the southern part of the United States, and in all warm climates, particularly in the East and West Indies, it finds more prolific sources of generation, than any where else. Hepatitis is usually ushered in by acute pain in the right Hypochondriac, sympathetic pains in the left shoulder, a short hacking cough, sometimes attended with bloody expectoration, The alvine evacuations, deficient in quantity, and of a clay colour, showing a deficiency of bile in them, on applying the hand over the region of the liver, a sense of



hardness will be frequently manifest to it
whilst a degree of pain, proportionate to this
pressure, will be invariably conveyed to the pa-
tient, added to these the difficulty of lying, but
on the affected side, constitute the most promi-
nent features of the incipient or acute stage
of Hepatitis. When any or all of the preceding
symptoms develop themselves we may without
much hazard decide the nature of the disease.
If there should exist with them any ambi-
guous symptoms, tending to throw a veil of
doubt over the subject, by resorting to the fol-
lowing test suggested by Professor Chapman
to his class, the most conclusive testimony
may be obtained in a majority of cases. Let
the patient be placed on his back in a hor-
izontal position, then elevate his knees, with
a view to flex the abdominal muscles, cause
him to make a deep and long inspiration
and then to expire in the same ratio, the liver
if much enlarged will immediately protrude
below the false ribs, and may be distinctly felt
by applying the hand to the part. It will



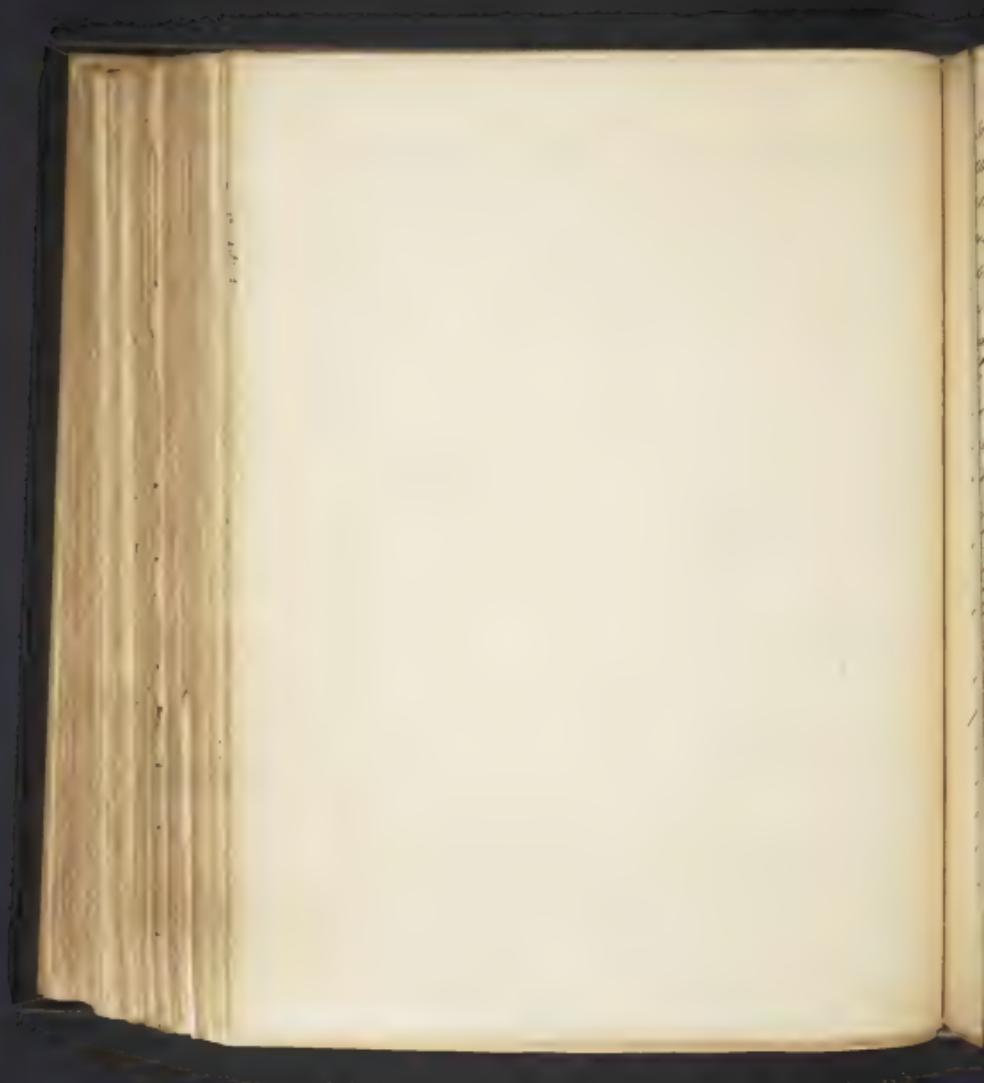
at once suggest itself, that although the plan recommended by Stephen Chapman, however certain it may be to detect any extensive affection of the liver, is wholly incompetent to the task, in its incipient stage, when its progress is necessarily small. Thus that although we may decide with certainty on its Hepatic character if the symptoms can be felt, we are not hasty to determine against its existence, in the absence of that decisive symptom. Since there are but few diseases with which it can be confounded, &c. (indeed I know of but one, and that is Phthisis Pulmonalis) we may safely in the presence of a ^{supposititious number} few of the symptoms already mentioned, proceed to treat it for Hepatitis. In doing so we cannot materially err, for the symptoms in the incipient stage of both diseases, indicate the same mode of treatment. Of the remote causes chiefly concerned in its production, exposure to ~~water~~ an excess of either heat or cold, violent exercise, inordinate indulgence of animal appetite in eating or drinking particularly the latter, or any cause calculated to weaken the powers of vitality.



may be considered the most efficient, I am very
much disposed to entertain a belief that a
majority of Hepatic cases occurring in the
United States, particularly in its Southern
division, might be often traced to misman-
aged and ill cured intermittent and other
fevers of a bilious type, than to any other
individual cause. To illustrate my views of
this subject I must beg leave to suppose, in
what form the original, & heat febrile diseases
of the character alluded to, have their primary
origin in the stomach, and are extended thro'
the agency of sympathy, little, if any, of
the hepatic viscera become involved in them
is to me as apparent as that the sun rises
bright at midday. In the cold stage of
fever, the cause there produces congestion
in the liver is perfectly intelligible, first
between the stomach and liver, there exists
an evident and intimate sympathy. The
fact, of that they are colleagues in the
great work of assimilation, is sufficiently
demonstrative of their mutual relation.

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The germ of fever, then having been applied to the stomach, and operating as a powerful and morbid stimulus upon it, its healthy action is for a moment suspended, or in other words, a disease usurps the place of its healthy action. The surface sympathises with it, the blood (as is evident from the palid appearance it presents) suffers from it and is precipitated to the exterior, congestion in the liver is the inevitable consequence, which being already predisposed to disease, is the more susceptible to morbid impression. But it may be argued, is not this stage succeeded by a like one and is not that in turn succeeded by a sweating one, at the expiration of which healthy action is restored, and healthy action being perfectly restored, is it not evident that disease has been eradicated. First. I admit, by stating the simple fact that the disease has a constitutional predilection to return after a definite intermission, and its returning is proof that morbid action has only been suspended.



Secondly, that although it may not return
the liver from being originally ~~sympa-~~ ^{engorged} ~~sympa-~~
thetically affected, it is taken on in a greater
measure or less degree, a morbid action inde-
pendent of the original impulse; so far
which requires the application of remedial
agents, differing essentially from those
which would have been required in the for-
mer stage of the original disease. When then
instead of employing prompt and efficient me-
asures to relieve the system of the function which
opposes it, by cleansing the stomach of its
vitiated contents by vomiting, and causing,
by action, mercurial purges, the liver to ~~empty~~ ^{engorge}
its contents; the physician is strictly attending
to the operation of the vis medicatrix. Not-
withstanding, first to give her time to evacuate a sup-
posed vitiated matter, in the stools, and then
to throw it out by the emunctories, resorting
to diaphoretics before arterial action is sub-
dued, and administering stimulants when
an overproportion already exists; the con-
sequence of this medical practice must be



inflammation of the liver, terminating in Hepatitis, as firmly established and as distinctly formed, as it could be produced by any other cause, for the constitution contending against remedy and disease either of which may form an outlet for life's most triumphant trials, or fall in the unequal conflict; or should it escape immediate annihilation, leave Hepatitis, inevitably entailed on it. It is a subject, which I approach with more reluctance than I can readily express but as it comes fairly within the sphere of the discussion, I feel that it is my duty to express my sentiments without reserve upon it. And I suppose that the truth of the case which I assert it, at my religious opinion, that a considerable proportion of Hepatic cases, that occur are the offspring of evil practice in bilious fevers, and that this evil practice is fairly chargeable to a too extended belief in the doctrines, promulgated by the humoral pathology; its disciples have been numerous



and amongst them may be ranked some of
the brightest stars that ever shone in the
constellation of medical science. against
this galaxy of virtue and wisdom, the voice
of calumny and detraction would be
raised in vain, but this concurrence, for
the medical sages of other days, so far
from having the effect to rouse the few
and inquiring into the accuracy of the
views which they left us on the subject,
should stimulate us, to follow in their ex-
cellent track, to prosecute the investigation
of a science, glorious beyond any other
because it seeks the alleviation of human
misery, and when we reflect that the sci-
ence of medicine, even in this enlightened
age, is in many parts, obscured by clouds
so penitent which an infinite eye seems
alone to be competent, it cannot be over-
sighted; so rarely even the humblest mem-
ber of the profession, to utter the judgment of
justice, and freely approve or condemn
as his judgment directs—



This is a theme boundless as the universe,
but I must not, allow myself to forget
the human species. I feel in the profession,
and will content myself with the simple
declaration, that my opinions are in entire
coincidence with those who regard the sol-
diers as the sovereign disseminators of disease,
action, to the adoption of these opinions
I have been guided by a light of unclouded
brievity, to be enabled to follow in the
path indicated by its beams, and to shine
with lustre borrowed from its inexhaustable
resources, from the limits of my ambition.
The long and continued application of cold to
the body, is inevitably followed by vi-
ceral congestion, sometimes its deleterious
effects may remain invisible for a length
of time, and then burst upon the view
with all its accumulated violence. Thus a
man in the days of his youth may have
been much exposed to its influence, and
by the agency of a strong constitution
live on for an indefinite term, without



feeling any inconvenience from it, until this
hurting cause, which has been so long pre-
ying on his mortifying other triumphs over
every difficulty by its long and continued
perseverance, or is called on and aided in
making a more violent effort, by ~~some~~
existing cause, and then appears as I have
before observed, Heat, (which in order ought
to have been first mentioned) may also
be considered a powerful agent in the pro-
duction of Hepatitis. Applied in except. to
a protracted period, it excites the heart
and actives to a more violent action
and by the increased intensity of its cir-
culation, inflammation is produced - Of
the precise modes operandi of these agents
in the production of inflammation, I am not
sufficiently acquainted to advance an opini-
on even satisfactory to myself. The cause
of inflammation, perhaps, involves as much
doubt, and presents as many difficulties to
its perfect comprehension, as any subject that
has been exhibited to the view of medical opinion



If this were not a fact, so many eminent yet
different opinions would not exist on the same
subject. That they are both powerful stim-
ulants, exciting by a power, independent
of any chemical or mechanical principle
the heart and arteries to a more violent action
deleterious or otherwise as circumstances may
dictate, I certainly believe, but a simple in-
crease of the circulation does not constitute
inflammation, a slight bodily exertion or a
spasmodic paroxysm of joy exhibit all these phenome-
na. The pulsation of the heart, the vibration
of the arteries, are visible, yet inflammation
is not the consequence of this pulmonary
excitement. Upon the ruins of the humoral
pathology a medical theory has been erected
which confers on the nervous system & to the
exclusion of every other the primary dis-
tribution of disease as well as healthy action.
Being disposed to connect to them this pro-
perty to its utmost extent, I can easily
imagine that irritation may be produced by
nervous influence and that whenever it occurs



congestion must follow. The part then in which congestion has occurred being called on to make an effort to relieve itself of the pressure, and failing, by the manifest superior strength of the oppressing cause, is weakened in the unequal conflict and subjected to inflammation. The stimulus of heat ~~or~~ cold, then, having been applied, ^{may be} the cause of nervous excitement - nervous excitement is the cause of an increase of arterial action. The power of the circulation, being thus preternaturally excited, is in obedience to a supreme law of the circulation, directed to some indefinite part which had been simultaneously irritated. If the part thus assailed by a redundant quantity of blood, is not able to react upon by these means to relieve itself, it is debilitated, and subjected as has been before observed, to inflammation. - I do not wish to be understood, to contrast that it is spontaneous to the production of inflammation, that the fountain of the circulation (to wit, the heart,) should be preternaturally excited. The arteries



possess a power by which the blood is made to circulate in them, independent of the heart, they may therefore be preferentially excited and produce inflammation perfectly independent of the heart or the general circulation. All this however does not explain why inflammation should locate itself in the liver, in preference to any other part, nor would I venture to affirm that it has any particular predilection for those parts, viscera. I am only advocating the opinion, that the trituration application of either heat or cold, is competent to the generation of inflammation, and that inflammation thus generated may locate itself in the liver. So high I now justify in maintaining the opinion that the liver is peculiarly subject to be injured by inflammation. Considering that inflammation is the consequence of diminished action, and that the circulation in the liver is comparatively sluggish and inactive, it will be apparent at one view, that its powers of combating disease are in the same proportion feeble, by way of

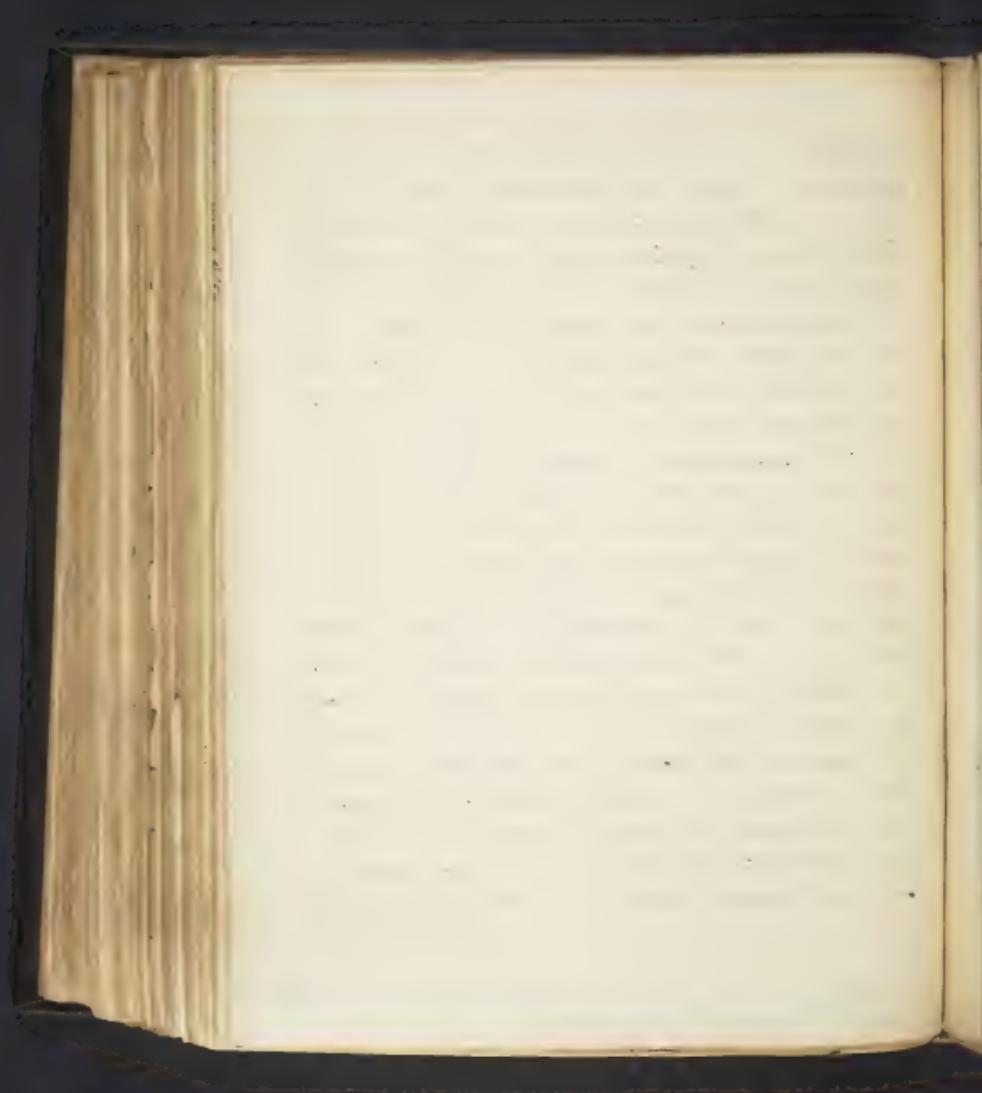
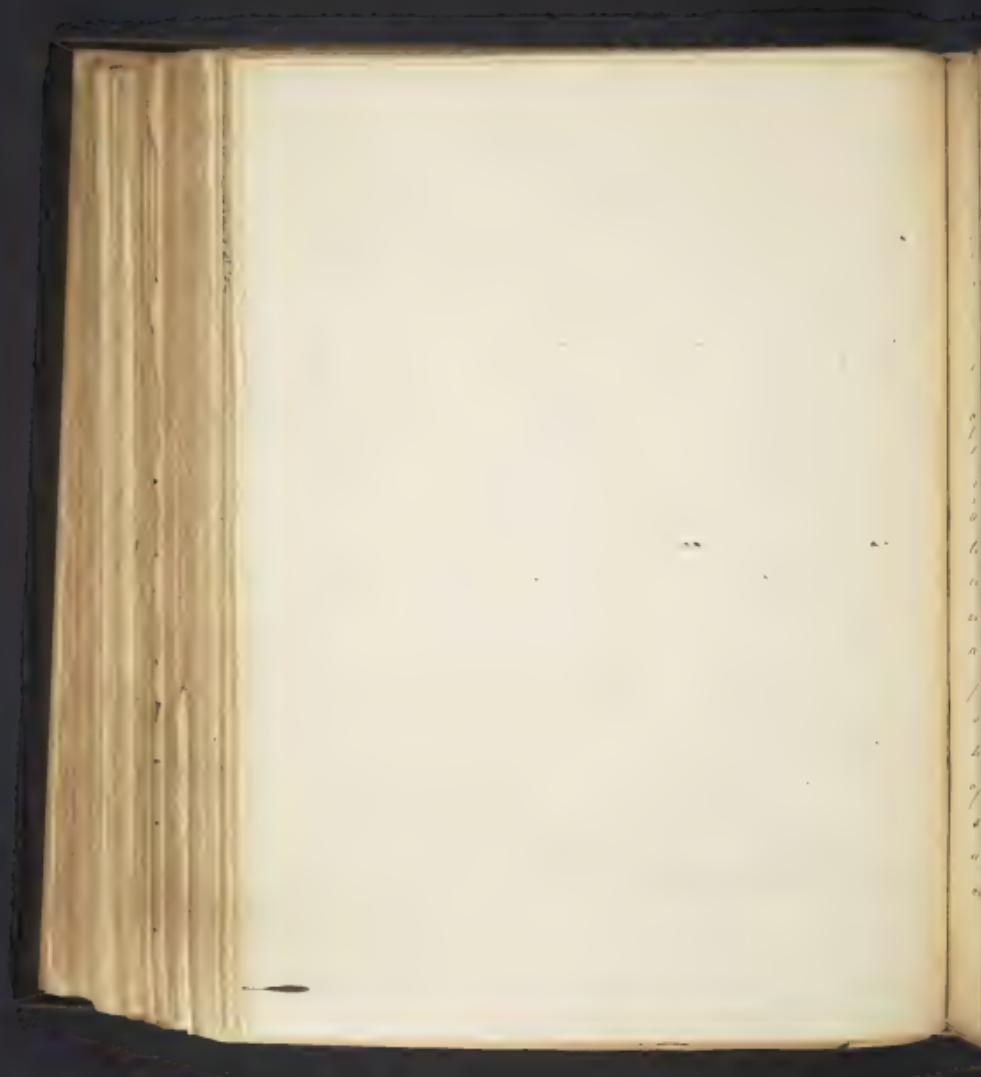


Illustration suppose that inflammation existed in every organ venturing to vitality, it is not impossible, that whilst by a more active circulation every other part might be enabled to rid itself of the oppressing cause - the liver alone for the want of that activity, would remain in a diseased condition. — — —

The incisive stage of acute hepatitis being highly inflammatory it is uniformly characterized by great febrile action indicated by a hard, full and quick pulse, and calls loudly for the extensive adoption of the Antiphlogistic mode of treatment. Proceeding to conduct the practice upon the general principles of inflammation we should resort to copious perspiration and with a view to derive all the benefit which the remedy is competent to afford, the quantity however being in proportion to the character of the inflammation exhibited, and it should be as suddenly abstracted as possible by opening a large orifice and speedily drawing off the blood. Its salutary effect is very much increased, Bleeding, conducted upon these principles, answers



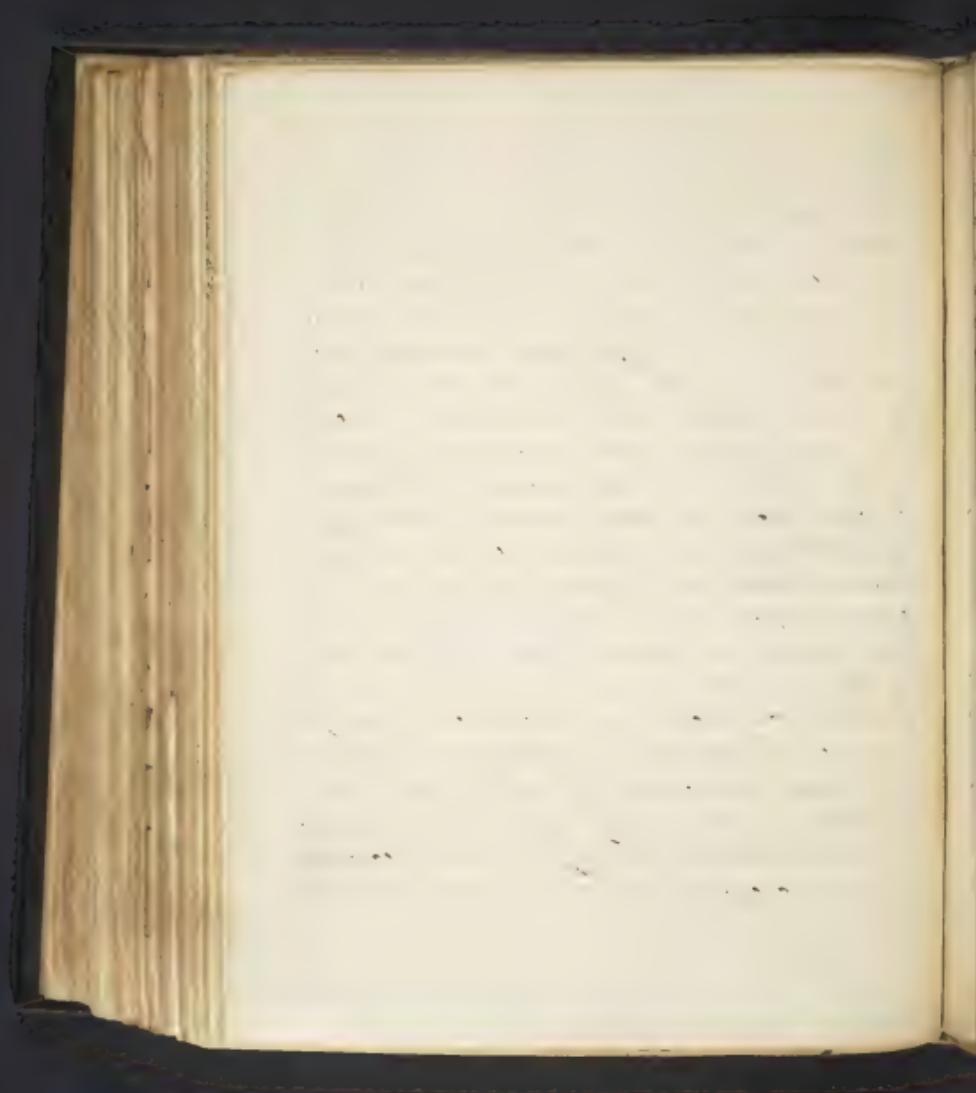
a double mitigation, first by detracting from the circulating mass, it abates the force and frequency of the pulse, subdues febrile action and allays pain. Secondly, it tends more effectually to counteract the morbid determination of blood to the liver. To explain the difference in the effect of a gradually and speedy abstraction of blood. Let us suppose a determination of blood of a definite force to any part of the system to change that determination, we consider the efficacy of bloodletting. Now it is evident, that a degree of strength proportioned to the resistance to be overcome, must be applied, and it is equally as evident that the whole of our opposing force brought into immediate action would be more effectual, than if employed in detachments, since in the first instance, the force we employ, being competent to overcome the resistance, succeeds by reason of its manifest superiority, whilst in the second being gradually applied it is generally overcome by the resistance of the cause, without any important effect having



been produced. I do not think, that more
conclusive proof could be obtained on any
subject, than the following fact adduced in
support of the superior efficacy of drawing
blood from a large orifice. Clinical experience
shows that whilst a quantity of blood may
be drawn from a man, through a small or-
ifice, without causing him to faint, half the
quantity drawn from an orifice of increased
size will produce the effect. I have dwelt
upon this subject, because I deem it a very
important practical point. But blood-letting
valuable and indispensable as it is in the
cure of this disease, cannot be relied on, to
the exclusion of other aperient remedies
we must therefore call ^{on} the aid of its
auxiliaries. The bowels will generally, I might
say universally, be in a torpid condition,
impeded with a preternatural collection
of fecal matter, which, operating as an
extraneous substance, affords in keeping
up irritation, and aggravates in no ordinary
degree, the strength of the morbid symptoms.



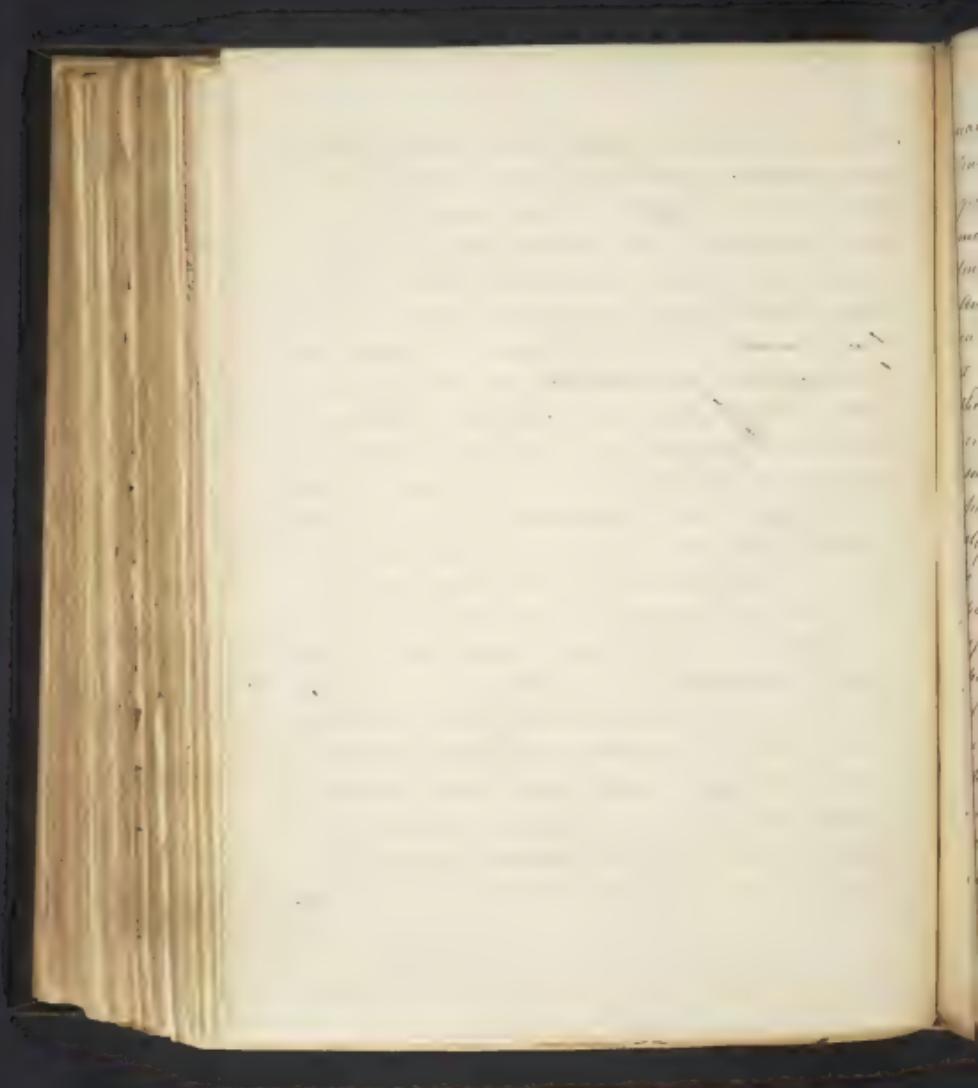
present in the system. The liver, the throne of the disease, oppressed with a morbid collection of bile, gives origin to symptoms, to the speedy removal of which, the attention of the skillful practitioner will be speedily called. To meet these indications, first to enervate the torpor or contraction of the alimentary canal, secondly to relieve the liver of its morbid contents and to invite a more vigorous and voluntary secretion. Tension points to the mercurial purgatives as the only efficient remedies in such cases.— I should choose the milder muriate of mercury to be followed by the exhibition of a dose of Balsam Siccum, in preference to any other assistant purgative, of the use of Calomel as a purgative, or indeed of any other remedy, in this disease. I cannot say that I speak from the conviction of experience, judging however by its superior efficacy in restraining morbid secretion of bile, a symptom familiar in the history of intermittent fevers, in which it is chiefly relied on, reasoning from analogy, teaches me to place it at the



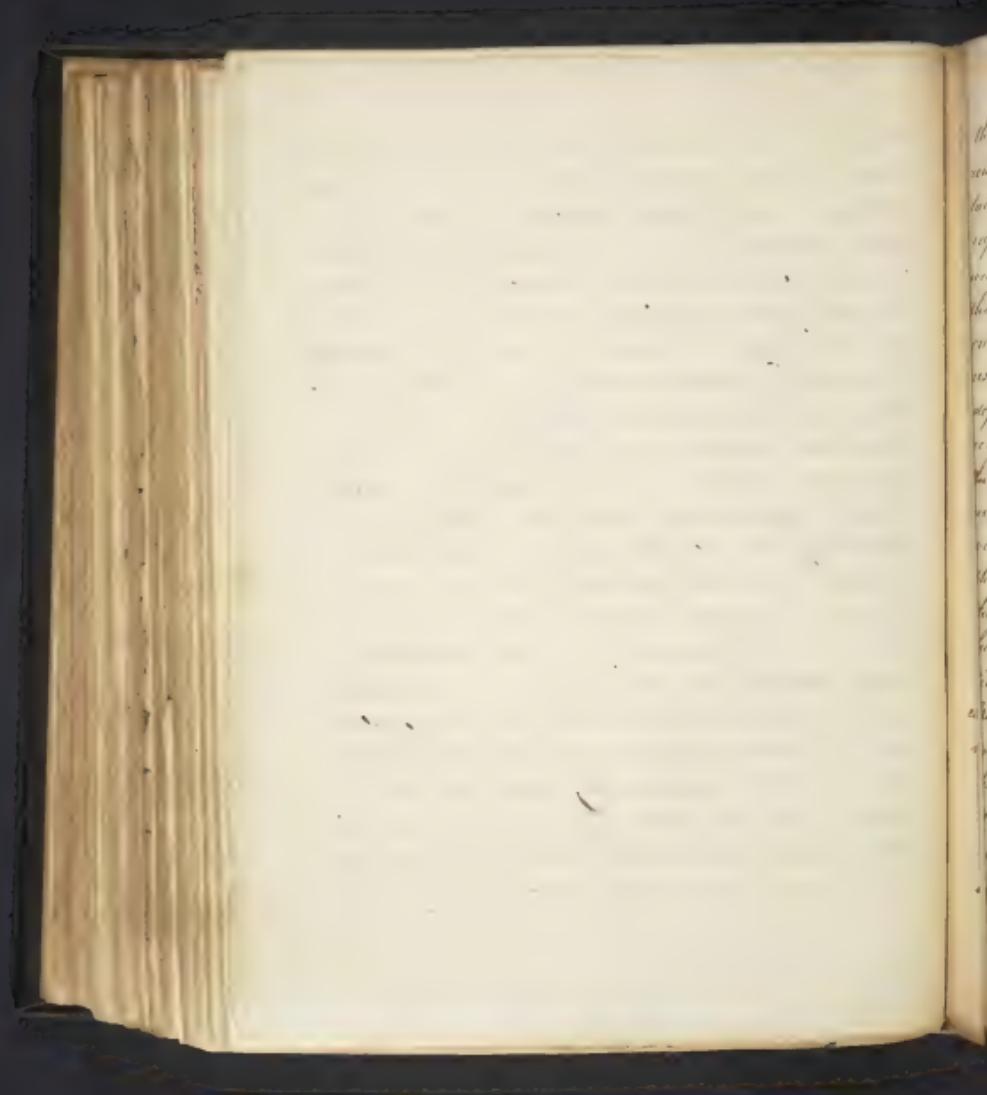
one of all violent agents in the course
of the inflammatory stage of acute Hepatitis
we do I believe that it is here we confine
safely to its voluntary powers, operating by
a principle specifically its own, it reaches
the alimentary canal, extends its influence
to the liver, causes it to pour out its vital
contents to pass off by the intestines, and
stimulates it to a more active and healthy
secretion. I may subject myself to ridicule
for laying so much emphasis on the supposed
specific nature of its operation, but in
ascribing specific virtues to it I am borne
up by the highest medical authority of
our country (I do not mean to say that I am not
open to the ~~objection~~ that it exists a specific of
feet on the liver when exhibited and operating
as a purgative). But I speak from the authority
of Hippo & Hippocrate, when I say that every
violent agent, no matter what its rank may
be, in the Materia Medica, operates in accordance
by a power specifically its own. I can, however,
testify to the truth of this theory, when



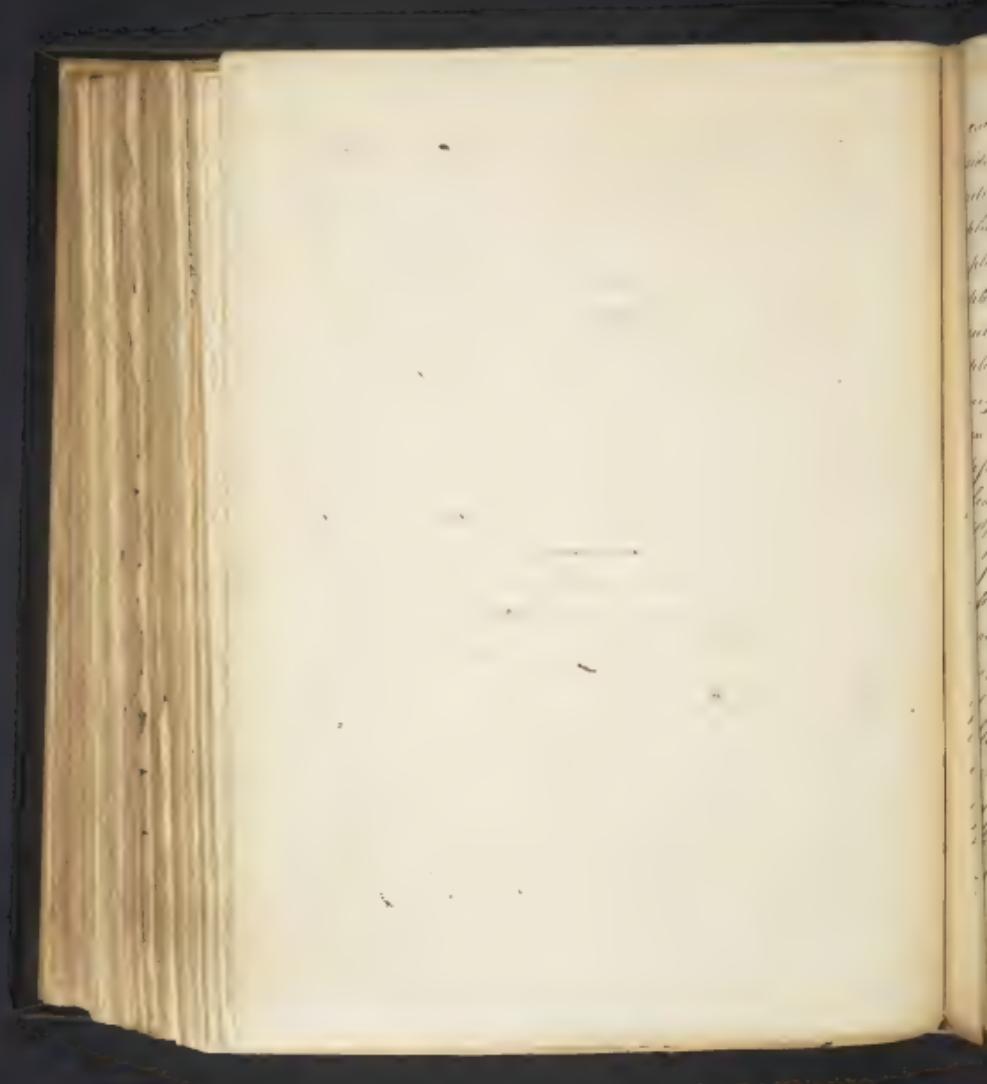
she, in her animal, vegetable, and mineral kingdom, extended and diversified as they are has with so careful a hand, distinguished them by such visible peculiarities that this plan is based on infinite wisdom, without it all would be disorder and confusion. Why medicine alone should be excluded from it, remains to be satisfactorily explained by the opponents of the theory. That the influence of calomel, given as a purgative on the liver, when compared with mercury, given to produce its de-terative effect or to salivate, is inconsiderable I most willingly concur, but that on some degree an alterative effect is produced I most firmly believe. Depletion having been extended to a sufficient degree and certain action subjoined, we may then resort to blisters, to be applied immediately over the region of the liver. Blisters applied here, acting by virtue of a stimulating principle, specifically their own, invite a delimitation of blood to the surface, remove morbid con-gestion in the liver, eradicate or relieve any ven-



sault of pain that may be present and finally
tend to break up the nervous train of motions
going on in it. and cause it to take on a
more healthy and salutary ^{resting} The plan of trea-
tment then, lies down, acted by a series
of simple justice regimens, will generally succeed
in removing an acute disease of the liver, if
it is not of a constitutional or hereditary dia-
thesis, in which case it is very apt to run
on to the chronic stage. But though we may
safely succeed in eradicating every al-
lative symptom, I doubt the propriety of
stopping here. Inflammation of the liver involves
so much fever that which is common to other
parts of the system, it is so much disposed to
assume a constitutional form, that I think, sound
policy strictly warrants us in according to the use
of mercury, to be given with a view to pro-
-mote its allative effect. To effect this purpose
the preparation of mercury I should prefer
would be, the blue pill, to be continued until
the organs of the patient are slightly affect-
ed. In some cases I should combine with it.



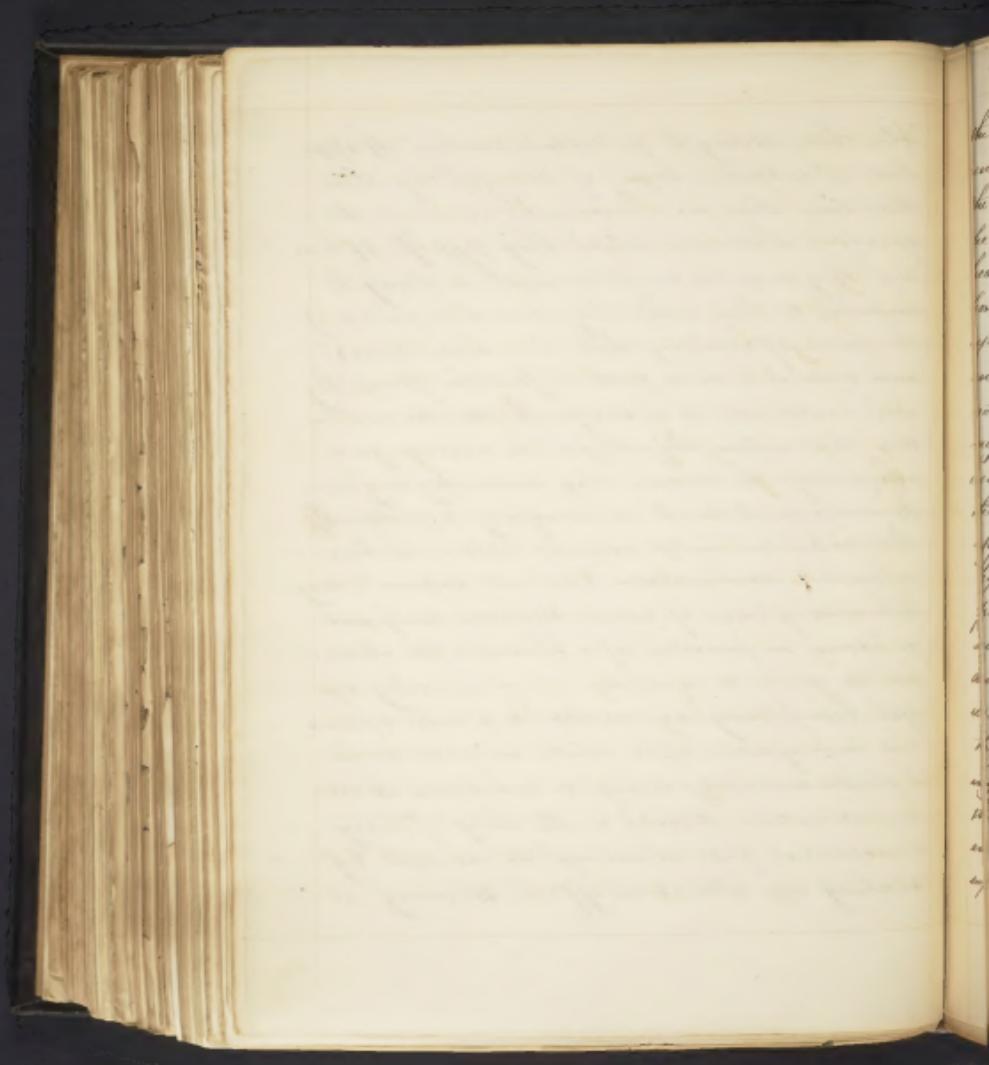
the Nitre Muriatic acid, the so much extolled
remedy of Dr Scott in Hepatitis, to be given as
laid down by Professor Chapman in his Hep-
atitis. I have not intended to say that I
would postpone the application of mercury in
this disease, until the hepatic symptoms had
entirely disappeared, on the contrary I would
resort to it as soon as the system, by active
depurative remedies, had been prepared for its
reception, my meaning is simply this, if
that I were called to a patient labouring
under a well developed case of Hepatitis, I
would use mercury ~~mercurial~~ mercury as I have stated
though its symptoms should disappear under
the purgative treatment. During the ex-
hibition of the mercury it will be essen-
tially necessary to keep down arterial action
as the astringent effect of the remedy can-
not be produced. So that venesection will
be found to answer the best purpose —
Setting it to be a part of my duty to offer
something in the shape of a warning for the
use of every remedy I have proposed, for the



use of this disease, I hope it will not be con-
sidered a trifling one your time of I make a
retrograde movement in the description, to ex-
plain my reason for procrastinating the ap-
plication of a blister. until, by the use of ex-
ploring incisions anterior action had been
subduced. The propensity of delaying the ap-
plication of blisters in all diseases charac-
terized by morbid increase of arterial action
until by depletion, that action had been
superseded, constitutes one of the most prominent
features in the character, of the theory of
Prof. Dr. St. L'Esperance. It appears to me to be
a fact too firmly fixed, to be successfully
opposed, that the numerous efficacy of blisters
rests exclusively in their stimulating proper-
ties & qualities, exerted through the medium
of sympathy. It follows therefore as an inescap-
able consequence, that if applied during the
existence of great inflammatory actions, ^{they} give
aggravation the disease. I have before observed
that they operate by a stimulating power
specifically their own, but like every thing



else. their strength is circumscribed. If applied to subdue a degree of strength less than their own. they will succeed by virtue of the specific stimulus. which they possess. If however they come in conflict. with a strength superior to their own. they will be deprived of the power of exerting their remedial virtues. and converted into fuel to feed the flame they were intended to extinguish. So, the reason then. that where they do not ~~do~~ succeed in eradicating the disease. they invariably augment its violence. I think it necessary to postpone their exhibition. until arterial action has been subdued or diminished. I am not disposed to deny that many cases of acute Hydrocephalus may and do occur in practice of a character too obstinate to yield to a mild use of mercury. and yet completely amenable to a more extensive employment of it. whilst in such a case I should certainly carry its exhibition to its utmost extent. I think it the duty of every practitioner first to attempt its removal by exciting its astringent effect. Mercury in



The present state of medical science stands
unrivaled in the Materia Medica. but I trust
the time is not far distant when disease will
be made to acknowledge the sovereignty of the
healing art. without its having recourse to the
benign effect of a salivation. from the intimate
sympathy that exists between the stomach
and liver. I have no doubt that in many if
not in all cases of acute Hepatitis, emetics
might prove highly useful. at sea voyage. I
would always recommend believing as I do
that its modus operandi is particularly
applicable to the cure of disease, marked
by a bilious diathesis. On the subject of dia-
phoretics I have been silent. their utility in
subduing febrile action is too manifest to be
doubted and consequently venesection having
with other depleting measures. been premised
they will prove valuable auxiliaries in combat-
ing inflammatory symptoms. to meet this purpose
the Antimorial powders are prescribed, as Calomel
enters into their composition. I have no doubt of their
superior efficacy over any other diaphoretic preparation. —

